THE JOURNAL OF INDUSTRIAL HYGIENE

EDITORS
DAVID L. EDSALL, M. D., S. D., United States
EDGAR L. COLLIS, M. D., M. R. C. S., Great Britain

VOLUME XIV
JANUARY, 1932—DECEMBER, 1932

PUBLISHED BY
HARVARD SCHOOL OF PUBLIC HEALTH
Boston, Mass.

EDITORS

United States

DAVID L. EDSALL, M.D., S.D.

Great Britain

E. L. COLLIS, M.D., M.R.C.S.

HONORARY CONSULTING EDITOR

SIR THOMAS M. LEGGE, M.D., D.P.H.

ASSOCIATE EDITORS

United States

W. IRVING CLARK, JR., M.D.
CECIL K. DRINKER, M.D.
EMERY R. HAYHURST, A.M., Ph.D., M.D.
YANDELL HENDERSON, Ph.D.
JAMES P. LEAKE, M.D.
WALTER R. MILES, PH.D.
HARRY E. MOCK, M.D.
C.-E. A. WINSLOW, M.S., A.M., Dr.P.H.
WILLIAM P. YANT, B.S.

Great Britain

JOHN C. BRIDGE, F.R.C.S.(E.) D.P.H.
SIR KENNETH GOADBY, K.B.E., M.R.C.S., D.P.H.
SIR LEONARD HILL, M.B., F.R.S.
T. LISTER LLEWELLYN, B.S., M.D., M.I.M.E.
SIR THOMAS OLIVER, M.D.
R. PROSSER WHITE, M.D., M.R.C.S.
H. M. VERNON, A.M., M.D.
D. A. COLES, M.D.

South Africa

E. H. CLUVER, A.M., M.D., B.Ch., D.P.H.

Canada

C . H. BEST, M.D.

Australia

CHARLES BADHAM, M.B., B.Sc., D.P.H.

MANAGING EDITORS

ALICE HAMILTON, A.M., M.D.

PHILIP DRINKER, B.S., Ch.E.

CONTENTS OF VOLUME XIV

JANUARY, 1932. NUMBER 1

PAGE

HYDROCYANIC ACID GAS POISONING BY ABSORPTION THROUGH THE SKIN. Philip Drinker, Department of Industrial Hygiene, Harvard School of Public Health, Boston, Mass. 1

THE NORMAL SENSITIVITY OF THE CARDIO-INHIBITORY CENTER. Walter R. Miles, Ph.D., Stanford University, California. 3

STUDIES ON EXPERIMENTAL PNEUMONOKONIOSIS. VIII. INHALATION OF QUARTZ DUST. Leroy U. Gardner, M.D. From the Saranac Laboratory for the Study of Tuberculosis, the Edward L. Trudeau Foundation, Saranac Lake, New York. 18

BOOK NOTICES. 38

FEBRUARY, 1932. NUMBER 2

THE BALTIMORE GAS APPLIANCE ORDINANCE AND ITS RELATION TO PUBLIC HEALTH. Wilmer H. Schulze, Chief, Division of Chemical Technology, City of Baltimore Health Department. 41

A PRESSURE CHAMBER INSTALLATION FOR STUDYING THE PHYSIOLOGIC EFFECTS OF PRESSURES VARYING FROM SIX TO SIXTY POUNDS PER SQUARE INCH ABSOLUTE. R. M. Thompson, C. P. Yaglou, and A. B. Van Woert. From the Departments of Physiology and Industrial Hygiene, Harvard School of Public Health, Boston, Mass. 57

CONTROL OF THE SILICOSIS HAZARD IN THE HARD ROCK INDUSTRIES. II. AN INVESTIGATION OF THE KELLEY DUST TRAP FOR USE WITH PNEUMATIC ROCK DRILLS OF THE "JACKHAMMER" TYPE. Theodore Hatch, Instructor in Sanitary Engineering, Harvard University; George S. Kelley, Mechanical Engineer, George J. Atwell Foundation Corporation, New York City; and J. William Fehnel, Chief Chemist, Laboratory of Industrial Hygiene, Metropolitan Life Insurance Company, New York City. 69

WILLIAM FRANCIS DEARDEN, M.R.C.S. (Eng.) L.R.C.P. (Lond.) D.P.H. (Vict.) J.P. 80

MARCH, 1932. NUMBER 3

MODERN PROBLEMS IN INDUSTRIAL MEDICINE. Leonard P. Lockhart, M.D., Medical Officer, Messrs. Boots Pure Drug Co., Ltd., Nottingham, England. 81

RECENT RESEARCH INTO THE CAUSES OF INDUSTRIAL ACCIDENTS. Eric Farmer, M.A., Investigator for the Industrial Health Research Board, London. 84

PAGE

FACTORS IN THE PRODUCTION OF NERVOUS LESIONS FOLLOWING ELECTRIC SHOCKS. Orthello R. Langworthy. From the Sub-Department of Neurology, The Johns Hopkins University, Baltimore, Md..... 87

THE MEASUREMENT OF RADIANT HEAT IN RELATION TO HUMAN COMFORT. H. M. Vernon, M.D., Investigator for the Industrial Health Research Board, London..... 95

BOOK NOTICES..... 112

APRIL, 1932. NUMBER 4

CONTRIBUTION TO THE METHODS USED FOR RAPID DETERMINATION OF DUST IN AIR. Carl Naeslund, M.D. From the Institute of Hygiene, University of Upsala..... 113

PROCEDURE FOR ESTABLISHING OPTIMUM AIR CONDITIONS FOR LIGHT AND HEAVY WORK. G. D. Arnaoutow and E. W. Weller. From the Laboratory of Physiology of the State Institute of Labor Protection, Moscow..... 117

CADMIUM POISONING: I. THE HISTORY OF CADMIUM POISONING AND USES OF CADMIUM. Leon Prodan, M.D., M.P.H., Dr.P.H. From the Departments of Physiology and Industrial Hygiene, Harvard School of Public Health, Boston, Mass..... 132

BOOK NOTICES..... 156

MAY, 1932. NUMBER 5

ON THE EFFECTS OF PROLONGED EXPOSURE TO SULPHUR DIOXIDE. Robert A. Kehoe, M.D., Willard F. Machle, M.D., Karl Kitzmiller, M.D., and T. J. LeBlanc, Sc.D..... 159

CADMIUM POISONING: II. EXPERIMENTAL CADMIUM POISONING. Leon Prodan, M.D., M.P.H., Dr.P.H. From the Departments of Physiology and Industrial Hygiene, Harvard School of Public Health, Boston, Mass..... 174

THE REACTIONS OF THE ORGANISM TO REPEATED ELECTRIC SHOCKS. Orthello R. Langworthy and William B. Kouwenhoven. The Johns Hopkins University, Baltimore, Md..... 197

BOOK NOTICES..... 205

JUNE, 1932. NUMBER 6

RESULTS OF SUPPLEMENTING THE DIETARY OF SUBSTANDARD WORKERS WITH COD LIVER OIL AND MILK. Arthur D. Holmes, Ph.D., and Madeleine G. Pigott, B.S., Research Laboratories, The E. L. Patch Company, Boston, Mass.; and Wm. Alfred Sawyer, M.D., and Laura Comstock, M.S., Medical Department, Eastman Kodak Company, Rochester, N. Y..... 207

THE TOXICOLOGY OF THE CARBONYLS. Arthur J. Amor, M.D. (Lond.), B.Sc. (Wales), Medical Officer, The Mond Nickel Company, Ltd..... 216

PAGE

Erysipeloid: Bacillus of Swine Erysipelas Infection—A Disease of Industry. Joseph V. Klauder, M.D., Professor of Dermatology and Syphilology, Woman's Medical College of Pennsylvania, Philadelphia, Pa. 222
Sir Thomas Morison Legge, C.B.E., M.D., D.P.H. 235
Book Notices 237

SEPTEMBER, 1932. NUMBER 7

The Occurrence of Boils among Men Working in Coal Mines. S. W. Fisher, B.A., M.D., H. M. Medical Inspector of Mines 243
Control of the Silicosis Hazard in the Hard Rock Industries. III. Design and Operation of a Dust Control System for Use with Pneumatic Rock Drills on Open Excavation. Theodore Hatch, Instructor in Industrial Sanitation, Harvard Engineering School; Henry Warren, Assistant in Industrial Hygiene, Harvard School of Public Health; and George S. Kelley, Mechanical Engineer, George J. Atwell Foundation Corporation, New York City 246
Cutaneous Papillomas among Patent Fuel Workers in Relation to Malignant Disease. C. C. R. Downing, M.A., M.D. (Cantab.), M.R.C.S. (Eng.) 255
Book Notices 280

OCTOBER, 1932. NUMBER 8

Chronic Poisoning by Oxalic Acid. With a Report of a Case and Results of a Study Concerning the Volatilization of This Acid from Aqueous Solution. Charles D. Howard, Director, Division of Chemistry and Sanitation, State Board of Health, Concord, New Hampshire 283
Asphyxia from an Unexpected Cause. E. L. Middleton, M.D., D.P.H. H. M. Medical Inspector of Factories, London 291
Carbon Monoxide Survey in Liberty Tubes, Pittsburgh. Report to the Chairman and Members of the Board of Commissioners of Allegheny County from the Carbon Monoxide Survey Committee, June 4th, 1932. Pittsburgh, Pennsylvania. C. B. Maits, M.D., Chairman 295
Modified Form of the Greenburg-Smith Impinger for Field Use with a Study of Its Operating Characteristics. Theodore Hatch, Henry Warren, and Philip Drinker. From the Department of Industrial Hygiene, Harvard School of Public Health, Boston, Mass. 301
Book Notices 312

PAGE

NOVEMBER, 1932. NUMBER 9

THE PROBLEM OF THE POSSIBLE HEALTH HAZARD OF LEAD-WEIGHTED SILK FABRIC. L. T. Fairhall and J. W. Heim. From the Department of Physiology, Harvard School of Public Health, Boston, Mass. 317

THE DETERMINATION OF A SINGLE INDEX OF ATMOSPHERIC CONDITIONS IN RELATION TO PHYSIOLOGIC EFFECTS. H. M. Vernon, M.D., Investigator for the Industrial Health Research Board, London 328

THE QUANTITATIVE DETERMINATION OF FINE SOOT INHALED BY MAN. A. I. Burstein. From the Sanitary Hygiene Section of the Odessa Psycho-Physiological Station on the Water Transport, Odessa, Ukraine, U. S. S. R. 339

DECEMBER, 1932. NUMBER 10

THE PNEUMONIA PROBLEM IN THE STEEL INDUSTRY. Dean K. Brundage and J. J. Bloomfield. From the U. S. Public Health Service 345

ALTERNATING CURRENT PRECIPITATORS FOR SANITARY AIR ANALYSIS. I. AN INEXPENSIVE PRECIPITATOR UNIT. II. ACID FORMATION IN ELECTRIC PRECIPITATORS. Philip Drinker, W. G. Hazard, and Tomoyoshi Ishikawa. From the Department of Industrial Hygiene, Harvard School of Public Health, Boston, Mass. 364

BOOK NOTICES 371

INDEX TO VOLUME XIV 375